

	<ul style="list-style-type: none"> • Circular Queue d. Concept of Priority Queue	1		
5.	Linked List <ul style="list-style-type: none"> a. Concept and Definition b. Inserting and Deleting nodes c. Linked implementation of a stack (PUSH/POP) d. Linked implementation of a queue (Insert/Remove) e. Circular List <ul style="list-style-type: none"> • Stack as a circular list (PUSH/POP) • Queue as a circular list (Insert/Remove) f. Doubly Linked List (Insert/Remove) 	1 2 2 1	6	8
6.	Tree <ul style="list-style-type: none"> a. Concept and Definition b. Binary Tree c. Introduction and application d. Operation e. Types of Binary Tree <ul style="list-style-type: none"> • Complete • Strictly • Almost Complete f. Huffman algorithm g. Binary Search Tree <ul style="list-style-type: none"> • Insertion • Deletion • Searching h. Tree Traversal <ul style="list-style-type: none"> • Pre-order traversal • In-order traversal • Post-order traversal 	1 1 1 2 2	7	9
7.	Sorting <ul style="list-style-type: none"> a. Introduction b. Bubble Sort c. Insertion d. Selection e. Quick f. Merge g. Comparison and Efficiency of sorting 	2 2 1	5	7
8.	Searching <ul style="list-style-type: none"> a. Introduction b. Sequential Searching c. Binary Search d. Comparison and Efficiency of Searching e. Hashing <ul style="list-style-type: none"> • Probing (Linear and Quadratic) 	2 2 1	5	7
9.	Graph <ul style="list-style-type: none"> a. Introduction b. Representation of Graph 	1	4	5

	<ul style="list-style-type: none"> • Array • Linked List 			
	c. Traversal <ul style="list-style-type: none"> • Depth First Search • Breadth First Search 	2		
	d. Minimum Spanning Tree <ul style="list-style-type: none"> • Kruskal's algorithm 	1		

Text Book:

Data Structures using C and C++, Y. Langsam, M.J. Augenstein, A.M. Tenenbaum

Reference Book:

The Design and Analysis of Algorithm, Nitin Upadhyay, SK Kataria & Sons

Prerequisite: C